

User Manual

Aztech DSL1015EN

ADSL2/2+ Wireless 802.11n 4 Port Modem Router

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About the Router

Your router offers an easy way of integrating your computer and other network devices into a single network. Here are some of the benefits you can obtain from using the router in your home or office:

Integrated Modem Feature Your router is an ideal solution for high speed Internet connectivity. It is capable of handling the fastest data transfer speed from your Internet provider and sharing this within your local network devices.

Top Notch Security Your router utilizes built-in firewall security to block service attacks. For added flexibility, it can be modified to allow specific applications to pass through while blocking intrusive threats at the same time.

Intuitive User Interface Applying changes on the router settings can be done easily using a Web browser. The router uses a simplified user interface that allows you to apply the configurations you want for the various features of the router.

Your router will serve as the central figure in establishing your local area network (LAN) by using a combination of hardware and software. The hardware includes the cables, wireless access points, and Ethernet ports that create the path to connect your devices. The software part includes the applications that manage the flow of information in these devices.

You can complete the basic installation and Internet connection within 8 minutes. Some more time is needed if you intend to utilize more advanced functions but it can be worth it. Advanced features like port forwarding will help you create your own web server to store your Web site, Dynamic DNS allows you to access your network from the Internet, and remote access enables you to configure your router settings from different locations.

Once installation is complete, it will be much more easier for you to enjoy voice communication, high speed Internet, and data/audio/video sharing within your network.

Requirements

Your computer must meet the following minimum requirements.

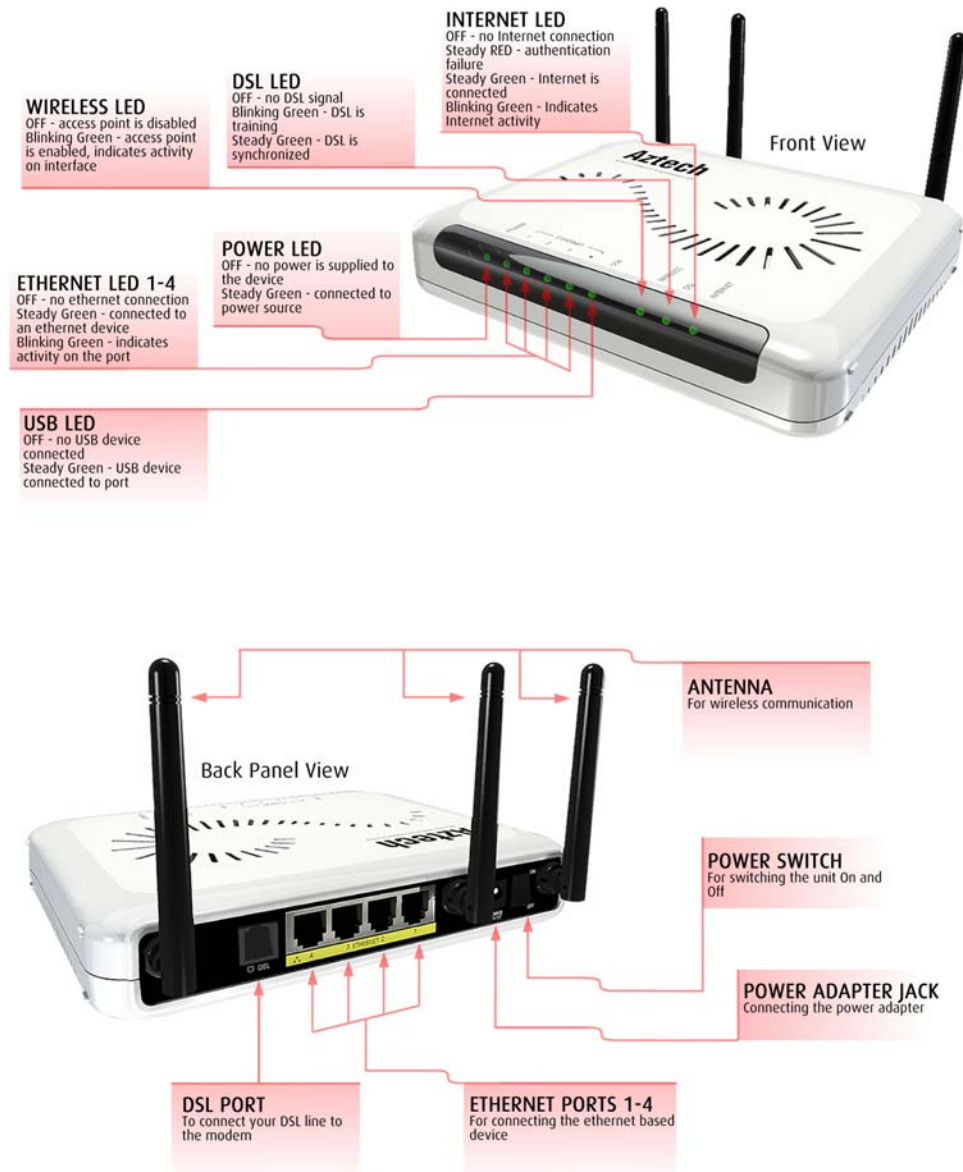
- Any operating system can be used
- Internet Explorer 4.0 or Netscape Navigator 3.02
- 233MHz processor
- CD-ROM Drive
- Ethernet network adapter
- An active DSL Internet account

Package Contents

Package contents are listed below. For any missing items, please contact your dealer immediately. Product contents vary for different models.

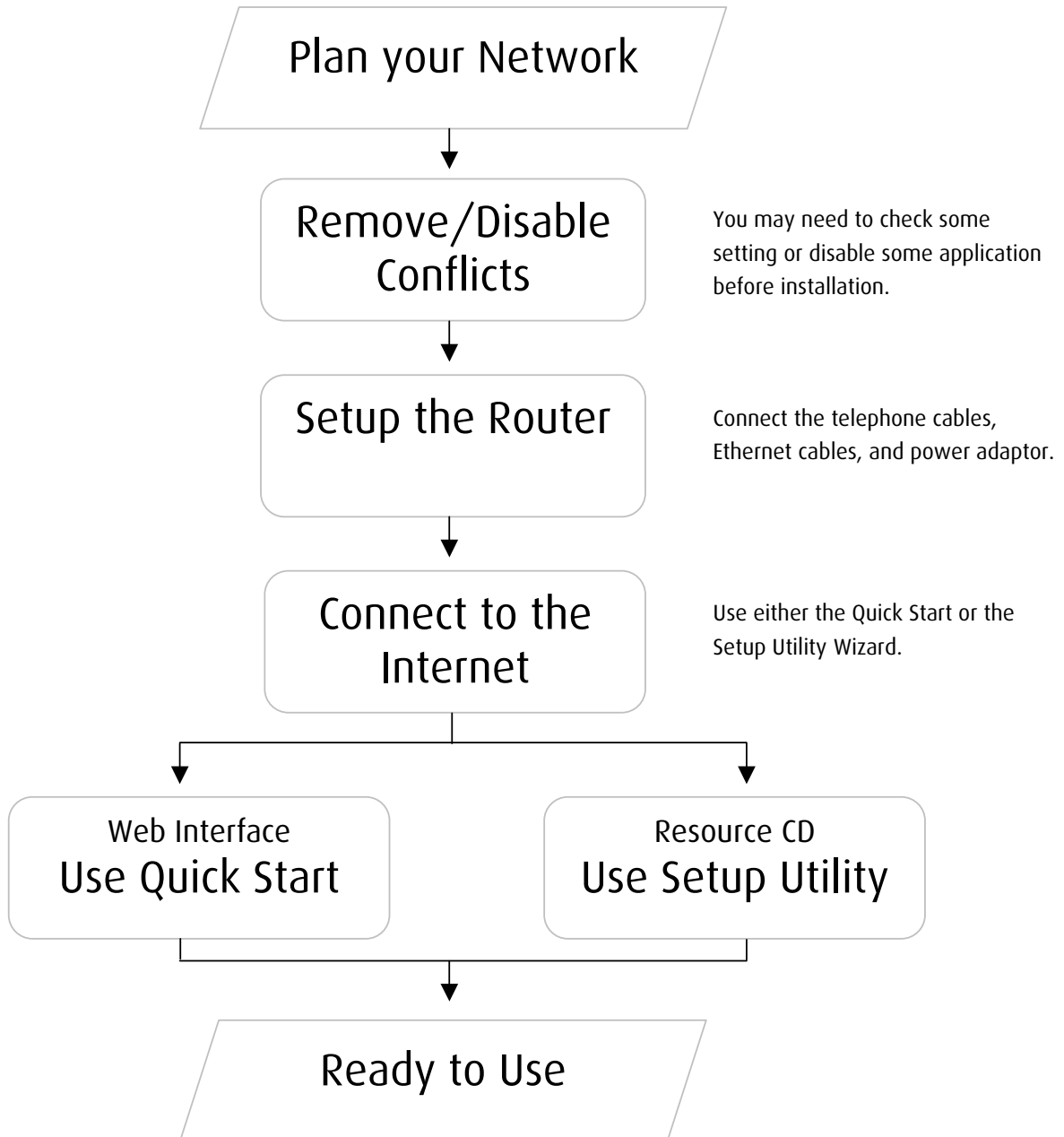
- Router
- Ethernet cable
- Telephone cable
- Power Adapter
- Easy Start Guide
- Resource CD
- POTS Splitter (optional)

Device Design



Getting Started

Setting up the device is easy. The flowchart below provides an outline of the steps needed to complete the installation. Brief descriptions appear beside each step. Detailed instructions are provided in the subsequent pages.



Planning Your Network

Before moving ahead to setup your network, it is a good idea to draw out a network diagram to help identify your network devices and plan out how to connect these devices. The illustration below is an example of a network diagram.



To create a network diagram:

- For wireless devices, identify the wireless devices you want to include in the network
- For wired devices, identify which router port you want to use for each device.

Remove or Disable Conflicts

To make sure the router installation moves on smoothly, you need to remove or disable conflicts that may interfere the installation. Probable conflicts may include:

- Internet sharing applications
- Proxy software
- Security software
- TCP/IP settings
- Internet properties
- Temporary Internet files

Internet Sharing, Proxy, and Security Applications

Internet sharing, proxy software, and firewall applications may interfere with the router installation. These should be removed or disabled before start the installation.

If you have any of the following or similar applications installed on your computer, remove or disable them according to the manufacturer's instructions.

Internet Sharing Applications	Proxy Software	Security Software
Microsoft Internet Sharing	WinGate	Symantec
	WinProxy	Zone Alarm

Configuring TCP/IP Settings

Check if your computer uses the default TCP/IP settings.

To check the TCP/IP properties:

1. Select Start > Run. This opens the Run dialog box.
2. Enter control ncpa.cpl and then click OK. This opens the Network Connections in your computer.
3. Right-click LAN and then select Properties. This opens the Local Area Connection Properties dialog box.
4. Select Internet Protocol (TCP/IP) and then click Properties. This opens the Internet Protocol (TCP/IP) dialog box.
5. Select Obtain an IP address automatically.
6. Click OK to close the Internet Protocol (TCP/IP) dialog box.
7. Click OK to close the Local Area Connection Properties dialog box.

Configuring Internet Properties

To set the Internet Properties:

1. Select Start > Run. This opens the Run dialog box.
2. Enter control inetcpl.cpl and then click OK. This opens Internet Properties.
3. Click Connections tab.
4. In the Dial-up and Virtual Private Network settings pane, select Never dial a connection.
5. Click OK to close Internet Properties.

Removing Temporary Internet Files

Temporary Internet files are files from Web sites that are stored in your computer. Delete these files to clean the cache and remove footprints left by the Web pages you visited.

To remove temporary Internet files:

1. Select Start > Run. This opens the Run dialog box.
2. Enter control and then click OK. This opens Control Panel.
3. Double-click Internet Options. This opens Internet Options.
4. In the Temporary Internet Files pane, click Delete Cookies.
5. Click Delete Files.
6. Click OK to close Internet Properties.

Setup the Device

When installing the router, find an area where there are enough electrical outlets for the router, the main computer, and your other computer devices.

To setup the router:

1. Plug one end of the Ethernet cable from the router's **ETHERNET** port and then plug the other end into the Ethernet port in your computer.
2. If you have another device you need to connect through wire into the router, use another piece of Ethernet cable. Plug one end of the Ethernet cable from the computer's Ethernet port and then plug the other end into an available Ethernet port in the router.
3. Plug one end of the telephone cable from the POTS Splitter's **ADSL** port and then plug the other end into the router's **DSL** port.

POTS Splitter

Your phone line carries with it both phone calls and Internet signals. When you are using the Internet, the connection produces high-pitched tones that can affect your voice calls when using the phone. Installing a Plain Old Telephone Service (POTS) splitter separates the two signals and eliminates the noise.

To setup the telephone POTS Splitter:

- a. Locate the phone jack in your house.
- b. Insert the POTS Splitter into the phone jack.
- c. Plug one end of the telephone cable from the POTS Splitter's **TEL** port and then plug the other end into the telephone.

4. Connect the power adapter from the router's 12V 1A DC port into the electrical outlet.
5. Switch ON.

Connecting to the Internet

There are two ways to connect to the Internet. You can either use the Web Interface or the Utility Wizard.

Connecting Via Quickstart

To connect to the Internet via the Web Interface:

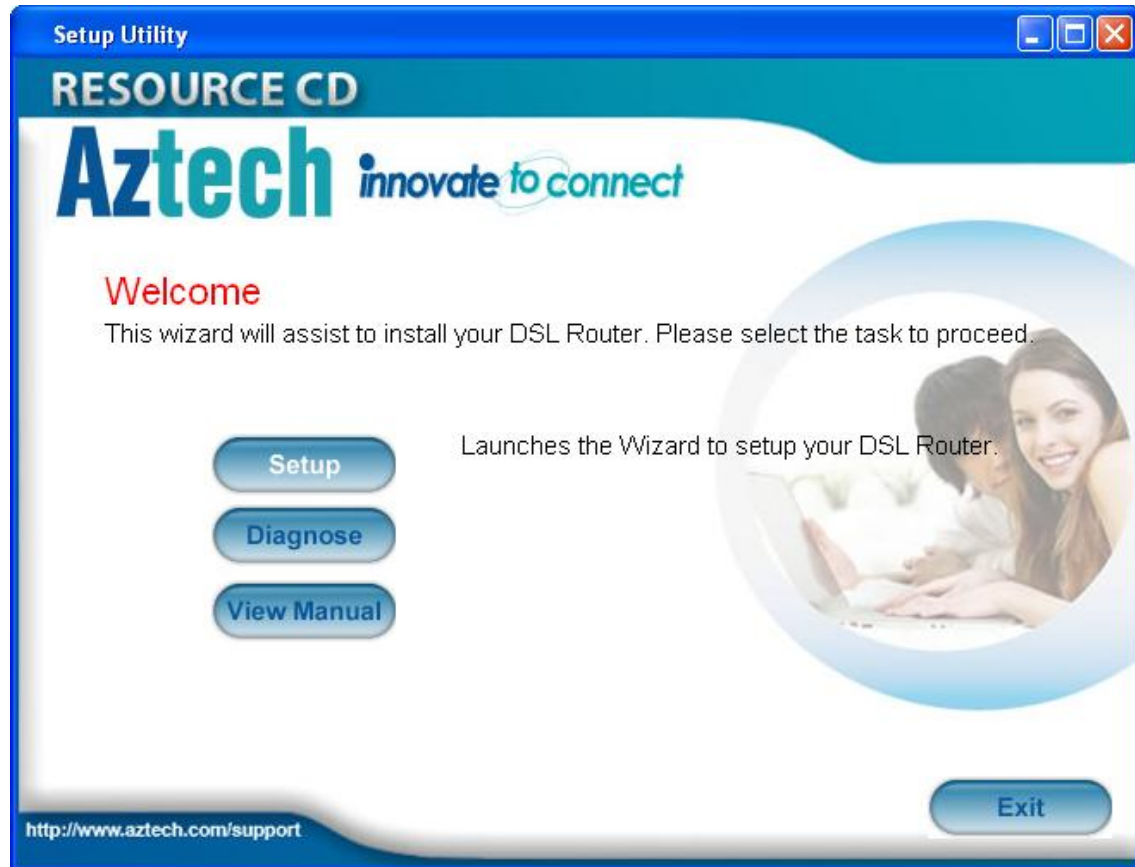
1. Open your browser.
2. On the address bar type `http://192.168.1.1`.
3. Enter the User name and Password, and then click OK. The default User name and Password is *admin*.
4. Select Quickstart.



5. Enter the connection settings, country and click on Connect

Connecting Via the Setup Utility Wizard

The Setup Utility Wizard can be used to configure your router. However, this only runs on Windows operating systems with a CD-ROM drive.



To connect to the Internet thru Setup Utility Wizard:

1. Insert the Resource CD into your CD-ROM.
2. If the utility does not launch automatically, select Start > Run, enter D:\Setup.exe (where D: is your CD-ROM drive), and then click OK. This opens the Setup Utility.
3. Follow the on screen instructions to complete router and internet setup.
4. After a successful connection, on the router's front panel, INTERNET lights up.

Connecting Wireless Devices

After you setup the device settings through the main computer, you can connect other devices with wireless capabilities. Wireless devices relieve you from the task of laying out cables and allow you to use the Internet connection from your router.



To the connect with wireless devices:

1. Turn on your wireless device.
2. Open the software you use to detect a wireless connection. This opens a window to ask for the connection settings.
3. Enter the connection settings. These settings are defined in your router during setup. For more details about wireless connections, please refer to Wireless Menu.

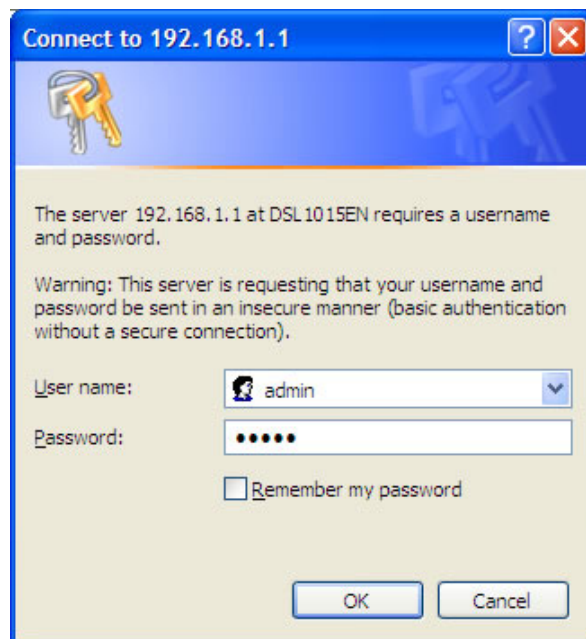
About the Web User Interface

The Web Interface is used to configure the router settings.

Accessing the Web User Interface

To access the Web User Interface:

1. Open your browser.
2. On the address bar type `http://192.168.1.1`
3. Enter the User name and Password, and then click OK. The default User name and Password is *admin*.



Menus

The Web User Interface includes the following menus:

- Basic
- Advanced

Basic

Aztech Web Manager ADSL2/2+ Wireless Gateway

Basic>Home

Connection Information

Upstream (Kbps) : 1308
Downstream (Kbps) : 26109
Connection Type : PPPoE
Username : username@ispname
IP Address : 192.168.100.22
Default Gateway : 192.168.100.1
Primary DNS Server : 192.168.2.1
Secondary DNS Server : 165.21.100.88
Internet Status : Up

Device Information

Model Number : DSL1015EN
Firmware Version : 176.106.1
Firmware Build : 003
Base MAC Address : 00:30:0A:8A:4C:00
Board ID : 96358M
Software Version : 3.10L.02.A2p8023n6.d20h
Bootloader (CFE) Version : 1.0.37-10.1
Wireless Driver Version : RT2880 INIC 1.1.7.3

Local Network Information

Management LAN IP : 192.168.1.1
DHCP Status : Enabled
DHCP Range : 192.168.1.2 - 192.168.1.254

Wireless Network Information

Wireless Network Name : aztech
Wireless Security Type : open

Advanced

Aztech Web Manager ADSL2/2+ Wireless Gateway

Advanced>WAN>Connection Summary

Wide Area Network (WAN) Setup

Choose Add, Edit, or Remove to configure WAN interfaces.
Choose Save/Reboot to apply the changes and reboot the system.

Port/ VPI/VCI	VLAN Mux	ID	Category	Service	Interface	Protocol	Igmp	QoS	State	Remove	Edit
0/0/35	Off	1	UBR	quickstart	ppp_0_0_35_1	PPPoE	Disabled	Enabled	Enabled	<input type="checkbox"/>	<input type="button" value="Edit"/>

Basic

Home

Displays the summary and provides an overview of the operating parameters used in your device.

Aztech Web Manager ADSL2/2+ Wireless Gateway

Basic > Home

Basic
Home
Quickstart

Advanced
WAN
LAN
Application
Quality of Service
Routing
Certificate
Wireless
Diagnostics
Security
Status
USB Device
System Password
Firmware Upgrade
Restore to Defaults
Save and Reboot

Connection Information		Device Information	
Upstream (Kbps) :	1308	Model Number :	DSL1015EN
Downstream (Kbps) :	26109	Firmware Version :	176.106.1
Connection Type :	PPPoE	Firmware Build :	003
Username :	username@ispname	Base MAC Address :	00:30:0A:8A:4C:00
IP Address :	192.168.100.22	Board ID :	96358M
Default Gateway :	192.168.100.1	Software Version :	3.10L.02.A2p8023n6.d20h
Primary DNS Server :	192.168.2.1	Bootloader (CFE) Version :	1.0.37-10.1
Secondary DNS Server :	165.21.100.88	Wireless Driver Version :	RT2880 INIC 1.1.7.3
Internet Status :	Up		

Local Network Information		Wireless Network Information	
Management LAN IP :	192.168.1.1	Wireless Network Name :	aztech
DHCP Status :	Enabled	Wireless Security Type :	open
DHCP Range :	192.168.1.2 - 192.168.1.254		

Internet 100%

Quickstart

Quickstart is used to establish an internet connection.

The screenshot shows the Aztech Web Manager interface. The top header includes the Aztech logo, 'Web Manager', and 'ADSL2/2+ Wireless Gateway'. A left sidebar contains a navigation menu with 'Basic' (Home, Quickstart) and 'Advanced' (WAN, LAN, Application, Quality of Service, Routing, Certificate, Wireless, Diagnostics, Security, Status, USB Device, System Password, Firmware Upgrade, Restore to Defaults, Save and Reboot) sections. The main content area is titled 'Basic > Quickstart' and contains 'Internet Login Account Settings' with fields for 'Username' (placeholder: username@ispname) and 'Password' (masked with dots), both with instructions to input information from the ISP. Below this is a 'Please Choose Country' section with radio buttons for 'Singapore' (selected) and 'Malaysia'. At the bottom are 'Connect' and 'Disconnect' buttons.

Aztech Web Manager ADSL2/2+ Wireless Gateway

Basic > Quickstart

Internet Login Account Settings

Username:
Please input the username given by your ISP

Password:
Please input the password given by your ISP

Please Choose Country

☒ Singapore
☐ Malaysia

Advanced

WAN

WAN allows you to add, edit, or remove WAN connections.

New Connection

To create a new WAN connection:

1. Click WAN.
2. Click New Connection.
3. Enter the connection settings:
 - a. Enter the ATM PVC Configuration, QoS Setting, and then click Next.

ATM PVC Configuration
This screen allows you to configure an ATM PVC identifier (PORT and VPI and VCI) and select a service category. Otherwise choose an existing interface by selecting the checkbox to enable it.

PORT: [0-3]

0

VPI: [0-255]

0

VCI: [32-65535]

35

AutoCheckPVC

VLAN Mux - Enable Multiple Protocols Over a Single PVC

☐

Service Category:

UBR Without PCR

Enable Quality Of Service
Enabling packet level QoS for a PVC improves performance for selected classes of applications. QoS cannot be set for CBR and Realtime VBR. QoS consumes system resources; therefore the number of PVCs will be reduced. Use **Advanced Setup/Quality of Service** to assign priorities for the applications.

Enable Quality Of Service

☐

Back

Next

- b. Select the Connection Type, Encapsulation, and then click Next.

Connection Type
Select the type of network protocol for IP over Ethernet as WAN interface

☐ PPP over ATM (PPPoA)

☐ PPP over Ethernet (PPPoE)

☐ MAC Encapsulation Routing (MER)

☐ IP over ATM (IPoA)

☒ Bridge

Encapsulation Mode
VC/MUX

Back Next

- c. Enable/Disable Bridge Service

Unselect the check box below to disable this WAN service

Enable Bridge Service: ☒

Service Name:

Back Next

- d. Check the settings. Click Back to apply modifications.

WAN Setup - Summary
Make sure that the settings below match the settings provided by your ISP.

VPI / VCI:	
Connection Type:	Bridge
Service Name:	test
Service Category:	UBR
IP Address:	Not Applicable
Service State:	Disabled
NAT:	Disabled
Firewall:	Disabled
IGMP Multicast:	Not Applicable
Quality Of Service:	Disabled

Click "Save" to save these settings. Click "Back" to make any modifications.
NOTE: You need to reboot to activate this WAN interface and further configure services over this interface.

Back Save

4. Click Save.

ADSL Modulation

The ADSL Modulation page allows you to select the modulation, the phone line pair and the capability.

DSL Settings
Select the modulation below.
☒ G.Dmt Enabled
☒ G.lite Enabled
☒ T1.413 Enabled
☒ ADSL2 Enabled
☒ AnnexL Enabled
☒ ADSL2+ Enabled
☐ AnnexM Enabled

Select the phone line pair below.
☒ Inner pair
☐ Outer pair

Capability
☒ Bitswap Enable
☐ SRA Enable

Connection Summary

Advanced Setup provides configuration options for other router functions. Provides a view of the connections made and the status of the connections.

Advanced>WAN>Connection Summary

Wide Area Network (WAN) Setup

Choose Add, Edit, or Remove to configure WAN interfaces.
Choose Save/Reboot to apply the changes and reboot the system.

Port/ VPI/VCI	VLAN Mux	ID	Category	Service	Interface	Protocol	Igmp	QoS	State	Remove	Edit
0/0/35	Off	1	UBR	quickstart	ppp_0_0_35_1	PPPoE	Disabled	Enabled	Enabled	<input type="checkbox"/>	<input type="button" value="Edit"/>

LAN

LAN Configuration

LAN allows you to modify the settings for your local network.

Local Area Network (LAN) Setup
Configure the DSL Router IP Address and Subnet Mask for LAN interface. Save button only saves the LAN configuration data. Save/Reboot button saves the LAN configuration data and reboots the router to make the new configuration effective.

IP Address:

192.168.1.1

Subnet Mask:

255.255.255.0

☐ Enable IGMP Snooping

☒ Standard Mode

☐ Blocking Mode

☐ Disable DHCP Server

☒ Enable DHCP Server

Start IP Address:

192.168.1.2

End IP Address:

192.168.1.254

Subnet Mask:

255.255.255.0

Leased Time (hour):

24

☐ Enable DHCP Server Relay

DHCP Server IP Address:

☐ Configure the second IP Address and Subnet Mask for LAN interface

Save

Save/Reboot

LAN Clients

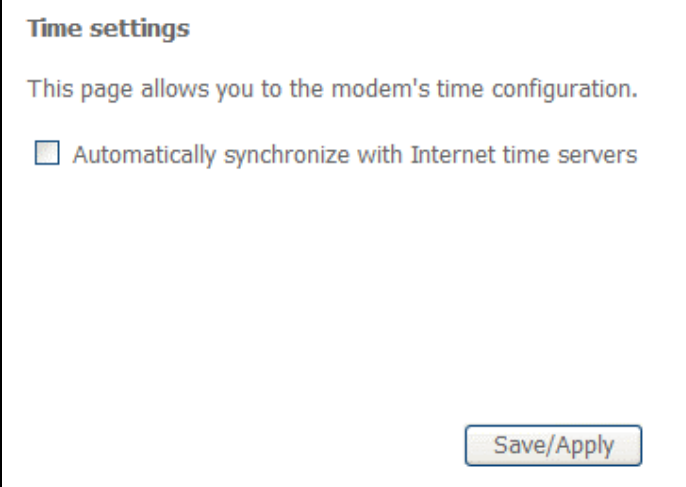
Displays all the DHCP clients connected to the router.

Device Info -- DHCP Leases			
Hostname	MAC Address	IP Address	Expires In
mycomputer	00:11:43:87:E7:F2	192.168.1.2	23 hours, 56 minutes, 58 seconds

Application

SNTP

Enable the SNTP client to automatically synchronize your time with a time server.



The screenshot shows a web-based configuration page titled "Time settings". Below the title is a descriptive sentence: "This page allows you to the modem's time configuration." There is a single checkbox labeled "Automatically synchronize with Internet time servers". At the bottom right of the form is a button labeled "Save/Apply".

SNMP

Simple Network Management Protocol (SNMP) allows a management application to retrieve statistics and status from the SNMP agent in this device.

DNS Server

DNS (Domain Name System) is an Internet service that translates domain names into IP addresses. Because domain names are alphabetic, they are easier to remember. However, the Internet is based on IP addresses. Therefore, each time you type a domain name, a DNS service must translate the name into the corresponding IP address. For example, the domain name `www.example.com` might translate to `198.105.232.4`. The DNS system consists of a network of DNS servers. If one DNS server does not know how to translate a particular domain name, it asks another one and so on until the correct IP address is returned.

If you select the Enable Automatic Assigned DNS checkbox, the router will receive and use the DNS Server assigned by your ISP.

To use your preferred DNS servers, disable the Enable Automatic Assigned DNS checkbox and key in the IP address of your Primary DNS server. Adding a Secondary DNS server is optional.

DNS Server Configuration

If 'Enable Automatic Assigned DNS' checkbox is selected, this router will accept the first received DNS assignment from one of the PPPoA, PPPoE or MER/DHCP enabled PVC(s) during the connection establishment. If the checkbox is not selected, enter the primary and optional secondary DNS server IP addresses. Click 'Save' button to save the new configuration. You must reboot the router to make the new configuration effective.

☒ Enable Automatic Assigned DNS

Dynamic DNS Client

The router offers a Dynamic Domain Name System (DDNS) feature. DDNS lets you assign a fixed host and domain name to a dynamic Internet IP Address. It is useful when you are hosting your own website, FTP server, or other server behind the router.

Before using this feature, you need to sign up for DDNS service providers. The router supports these popular Dynamic DNS service providers:

- www.dyndns.org
- www.tzo.com

Click Add to create a Dynamic DNS setting.

Dynamic DNS

The Dynamic DNS service allows you to alias a dynamic IP address to a static hostname in any of the many domains, allowing your DSL router to be more easily accessed from various locations on the Internet.

Choose Add or Remove to configure Dynamic DNS.

Hostname	Username	Service	Interface	Remove
----------	----------	---------	-----------	--------

Using DynDNS.org

Key in the following parameters:

D-DNS provider Select DynDNS.org.

Hostname Enter the hostname.

Interface Select an interface.

DynDNS Settings Enter your dyndns.org Username and password.

Add dynamic DDNS

This page allows you to add a Dynamic DNS address from DynDNS.org or TZO.

D-DNS provider	<input type="text" value="DynDNS.org"/>
Hostname	<input type="text"/>
Interface	<input type="text" value="quickstart/ppp_0_0_100_1"/>
DynDNS Settings	
Username	<input type="text"/>
Password	<input type="password"/>

Save/Apply

Using TZO

Key in the following parameters:

D-DNS provider Select TZO.

Hostname Enter the hostname.

Interface Select an interface.

TZO Settings Enter your TZO e-mail and key.

Add dynamic DDNS

This page allows you to add a Dynamic DNS address from DynDNS.org or TZO.

D-DNS provider	<input type="text" value="TZO"/>
Hostname	<input type="text"/>
Interface	<input type="text" value="quickstart/ppp_0_0_100_1"/>
TZO Settings	
Email	<input type="text"/>
Key	<input type="text"/>

Save/Apply

Port Triggering

Some applications require that the specific ports in the router's firewall be opened for access by the remote parties. For instance, an application uses port 25 for requests and port 113 for replies. If a computer on the LAN connects to port 25 on a remote server hosting this application, using Port Triggering on the router, incoming connections to port 113 (from the remote server) could be redirected to the PC which initiated the request. A maximum of 32 entries can be configured.

NAT -- Port Triggering Setup

Some applications require that specific ports in the Router's firewall be opened for access by the remote parties. Port Trigger dynamically opens up the 'Open Ports' in the firewall when an application on the LAN initiates a TCP/UDP connection to a remote party using the 'Triggering Ports'. The Router allows the remote party from the WAN side to establish new connections back to the application on the LAN side using the 'Open Ports'. A maximum 32 entries can be configured.

Add

Remove

Application	Trigger		Open		Remove	
Name	Protocol	Port Range		Protocol	Port Range	
		Start	End		Start	End

Click Add to setup Port Triggering.

NAT -- Port Triggering

Some applications such as games, video conferencing, remote access applications and others require that specific ports in the Router's firewall be opened for access by the applications. You can configure the port settings from this screen by selecting an existing application or creating your own (Custom application) and click "Save/Apply" to add it.

Remaining number of entries that can be configured:32

Application Name:

Select an application: Select One

Custom application:

Save/Apply

Trigger Port Start	Trigger Port End	Trigger Protocol	Open Port Start	Open Port End	Open Protocol
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP
		TCP			TCP

Save/Apply

Port Forwarding

Virtual Server allows you to direct incoming traffic from the Internet to a specific computer in your local network. A maximum 32 entries can be configured.

NAT -- Virtual Servers Setup

Virtual Server allows you to direct incoming traffic from WAN side (identified by Protocol and External port) to the Internal server with private IP address on the LAN side. The Internal port is required only if the external port needs to be converted to a different port number used by the server on the LAN side. A maximum 32 entries can be configured.

Server Name	External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End	Server IP Address	Remove
-------------	---------------------	-------------------	----------	---------------------	-------------------	-------------------	--------

Click Add to create a Virtual Server.

As an example, to setup a web server on a computer using 192.168.1.88 as its IP Address, select HTTP as Service and enter 192.168.1.88 as the Server IP Address. Otherwise if the service you want to setup is not available from the Select a Service drop-down list, you can define your own Virtual Server.

NAT -- Virtual Servers

Select the service name, and enter the server IP address and click "Save/Apply" to forward IP packets for this service to the specified server. NOTE: The "Internal Port End" cannot be changed. It is the same as "External Port End" normally and will be the same as the "Internal Port Start" or "External Port End" if either one is modified. Remaining number of entries that can be configured:32

Server Name:

☒ Select a Service: Select One
☐ Custom Server:

Server IP Address:

External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		
		TCP		

Port Mapping

Port Mapping allows you to create groups composed of the various interfaces available in your router.

Port Mapping -- A maximum 16 entries can be configured

Port Mapping supports multiple ports to PVC and bridging groups. Each group will perform as an independent network. To support this feature, you must create mapping groups with appropriate LAN and WAN interfaces using the Add button. The Remove button will remove the grouping and add the ungrouped interfaces to the Default group. Only the default group has IP interface.

Group Name	Enable/Disable	Remove	Edit	Interfaces	Enable/Disable
Default				USB	<input checked="" type="checkbox"/>
				ENET	<input checked="" type="checkbox"/>

Click Add to create a port mapping group.

Port Mapping Configuration

To create a new mapping group:

1. Enter the Group name and select interfaces from the available interface list and add it to the grouped interface list using the arrow buttons to create the required mapping of the ports. The group name must be unique.
2. If you like to automatically add LAN clients to a PVC in the new group add the DHCP vendor ID string. By configuring a DHCP vendor ID string any DHCP client request with the specified vendor ID (DHCP option 60) will be denied an IP address from the local DHCP server.
Note that these clients may obtain public IP addresses
3. Click Save/Apply button to make the changes effective immediately

Note that the selected interfaces will be removed from their existing groups and added to the new group.

IMPORTANT If a vendor ID is configured for a specific client device, please REBOOT the client device attached to the modem to allow it to obtain an appropriate IP address.

Group Name:

Grouped Interfaces Available Interfaces

ENET
USB

Automatically Add Clients With the following DHCP Vendor IDs

DMZ Host

The DMZ host computer will receive all the IP packets from WAN that are not configured to go to other computers through virtual servers or port forwarding.

[Advanced](#)>[Application](#)>[DMZ Host](#)

DMZ Host

The DSL router will forward IP packets from the WAN that do not belong to any of the applications configured in the Virtual Servers table to the DMZ host computer.

Enter the computer's IP address and click "Apply" to activate the DMZ host.

Clear the IP address field and click "Apply" to deactivate the DMZ host.

DMZ Host IP Address:

Save/Apply

TR069 Client

As a TR-069 capable router, the Internet service provider can remotely update the settings of the device.

TR-069 client - Configuration

WAN Management Protocol (TR-069) allows a Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device.

Select the desired values and click "Apply" to configure the TR-069 client options.

Inform ☒ Disable ☐ Enable

Inform Interval:

ACS URL:

ACS User Name:

ACS Password:

☒ Connection Request Authentication

Connection Request User Name:

Connection Request Password:

Save/Apply

GetRPCMethods

Access Control Services

Select which Services to allow and whether to allow from the LAN or the WAN.

Access Control -- Services
A Service Control List ("SCL") enables or disables services from being used.

Services	LAN
FTP	<input checked="" type="checkbox"/> Enable
HTTP	<input checked="" type="checkbox"/> Enable
ICMP	Enable
TELNET	<input checked="" type="checkbox"/> Enable
TFTP	<input checked="" type="checkbox"/> Enable

Save/Apply

Print Server

The DSL1015EN is equipped with a USB Host print server on board. To use the print server on the DSL1015EN, you need to accomplish the following tasks:

1. Install the printer drivers on the computer
2. Enable the DSL1015EN for Print Server
3. Add a network printer

INSTALL THE PRINTER DRIVERS

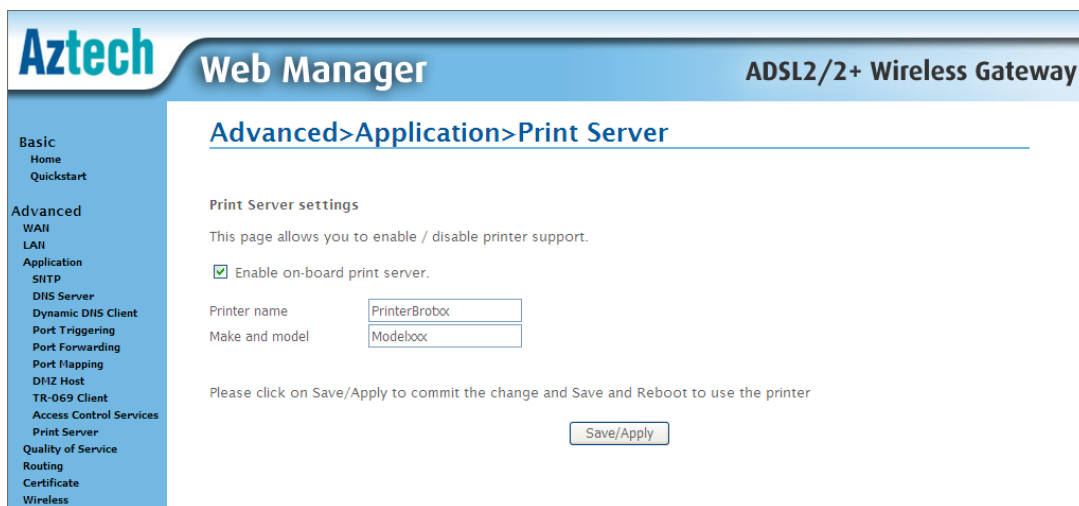
Printers using the USB port come with a software installation CD for installing the printer drivers and applications. The drivers for the printers must be installed on the computer first to prepare it to use the printer when it's connected to the DSL1015EN. Refer to the printer's documentation on how to install the drivers.

ENABLE THE PRINT SERVER APPLICATION

1. Open your Internet browser and log on to <http://192.168.1.1>, on the authentication page, type **admin** for both the username and password.



2. Click on **Application** under **Advanced** and click on **Print Server**.
3. Click on **Enable on-board print server**.
4. Input the **Printer Name** and **Printer Make and Model** on the fields.
5. To commit and save the changes, click on **Save/Apply** button.



CONNECTING THE PRINTER

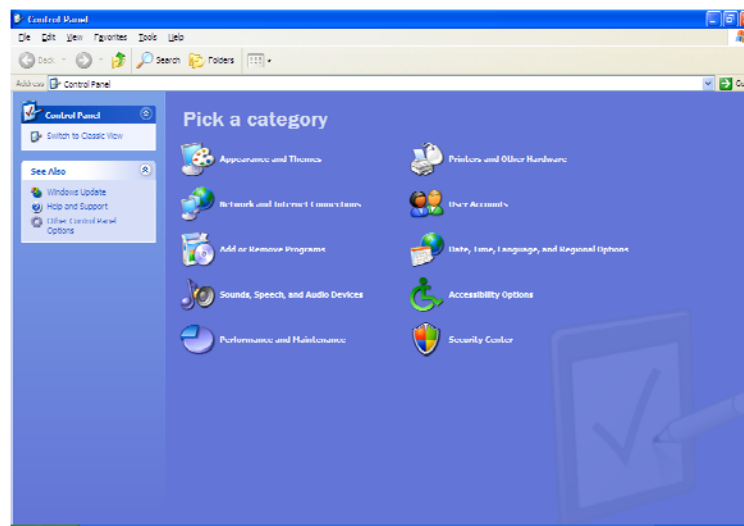
1. Turn OFF the DSL1015EN.
2. Connect the Printer on the USB port and switch it ON.

ADD A NETWORK PRINTER

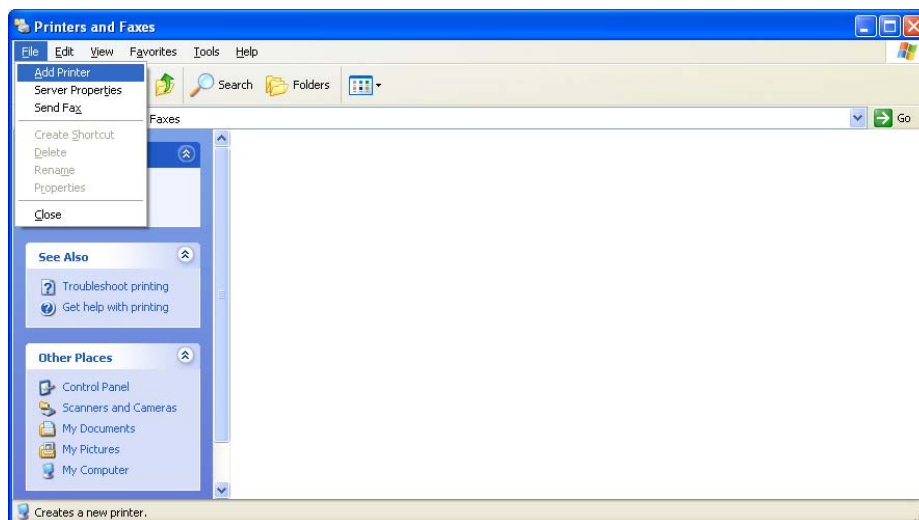
FOR WINDOWS XP

Before you continue, ensure that you've installed the printer drivers on this computer and the printer is attached to the DSL1015EN.

1. Click on the **Start Button > Control Panel > Printers and Other Hardware > Printers and Faxes.**



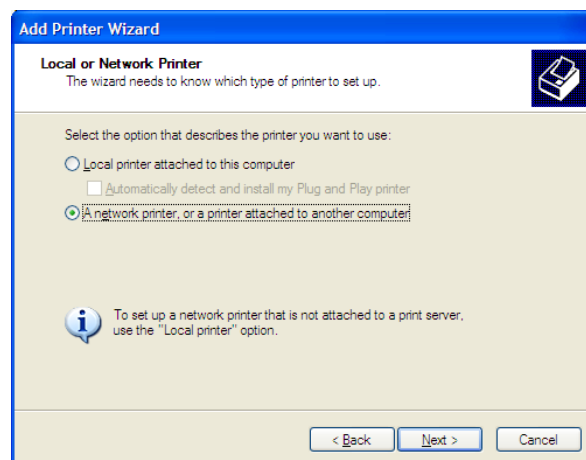
2. Click on the **File Menu > Add Printer.**



- Click on **Next** on the **Add Printer Wizard** page.

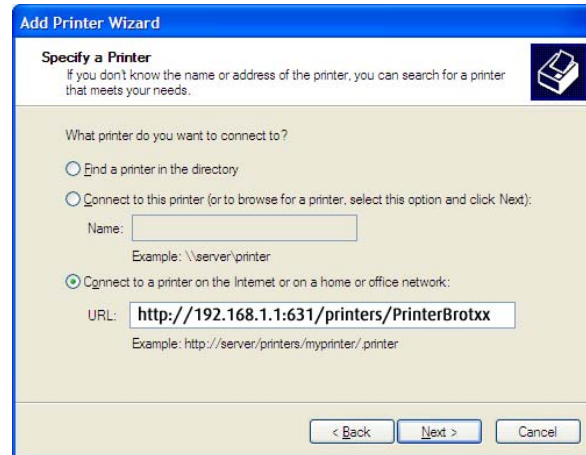


- Choose **A network printer, or a printer attached to another computer** and click **Next**, on the **Local or Network Printer** page.

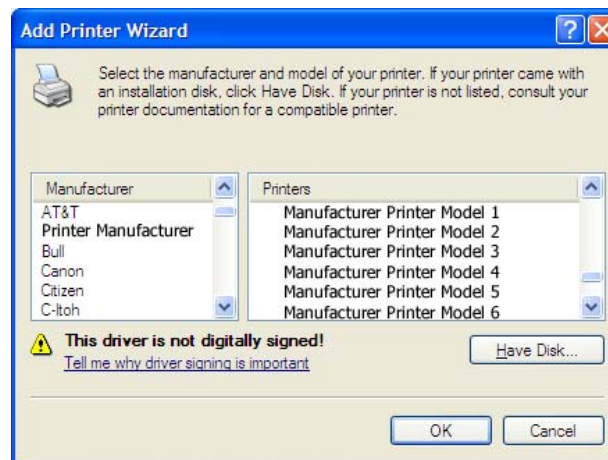


- Choose **Connect to a printer on the Internet or on a home or office network:**, on the **Specify a Printer** page.
- On the **URL** field, input the following and click **Next**.

This is the printer name that you've set earlier
 http : //192.168.1.1: **631**/printers/ PrinterBrotxx



7. Once the computer detects the printer on the Print Server, it will ask for the printer manufacturer and model, a list of printers will be shown, select the your printer from the list and click **OK**.



8. Click **Finish**, on the **Completing the Add Printer Wizard** page.

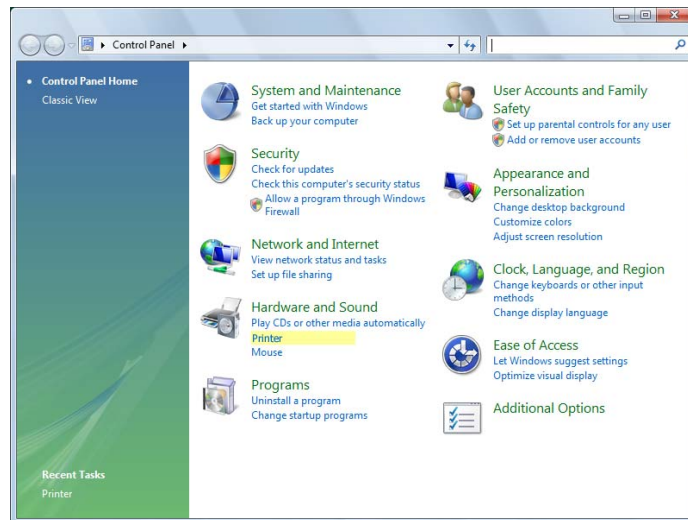


PRINTING A TEST PAGE AFTER INSTALLATION

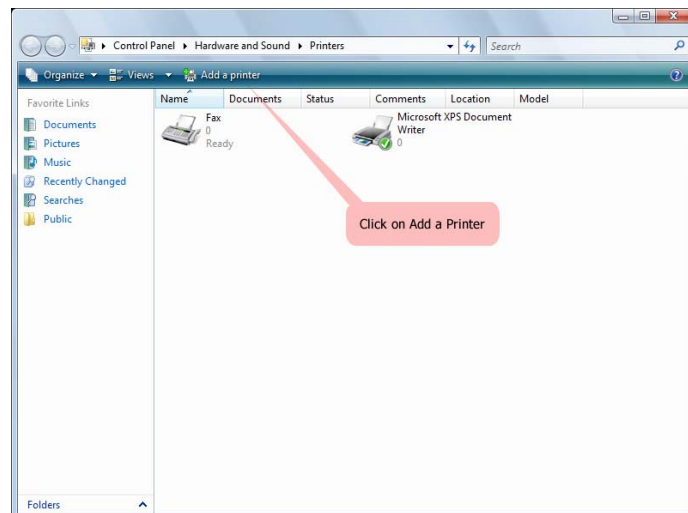
1. Open the Printers and Faxes page from Control Panel.
2. Right click on the new printer and click on Properties.
3. Click on the Print Test Page button on the Printer properties page, the test page will be printed on the network printer.

FOR WINDOWS VISTA

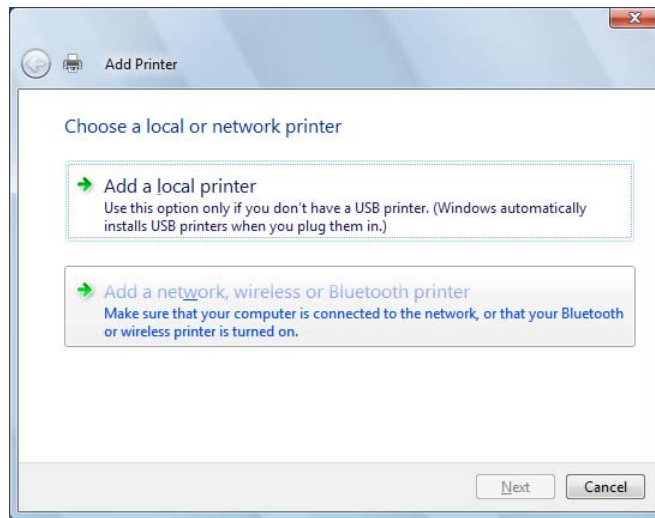
1. Click on the **Start Button**> **Control Panel**.
2. Click **Printer** under the **Hardware and Sound** category.



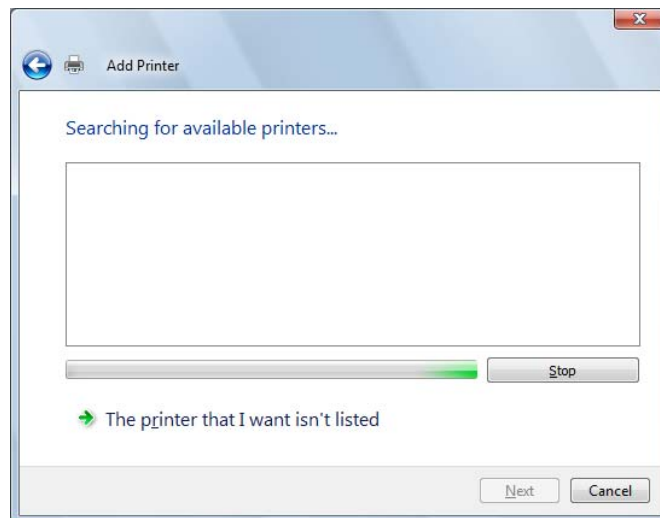
3. Click on **Add a Printer**.



- Click on **Add a network, wireless or Bluetooth printer**.



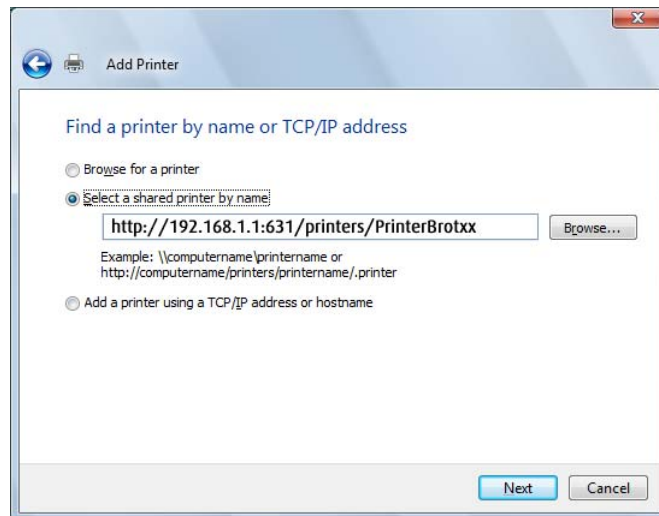
- Click on **Stop** on **Searching for available printers...** page.
- Click on **The printer that I want isn't listed**.



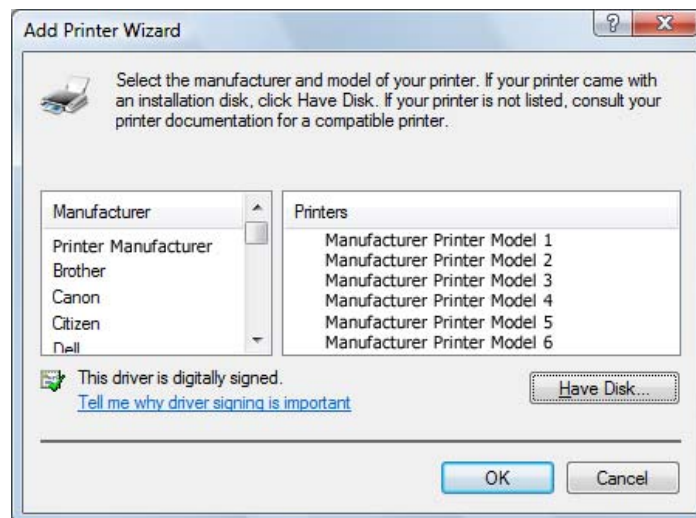
- Click on **Select a shared printer by name** on the **Find a printer by name on TCP/IP address**, and input the following URL on the field and click on **Next**.

This is the printer name that you've set earlier

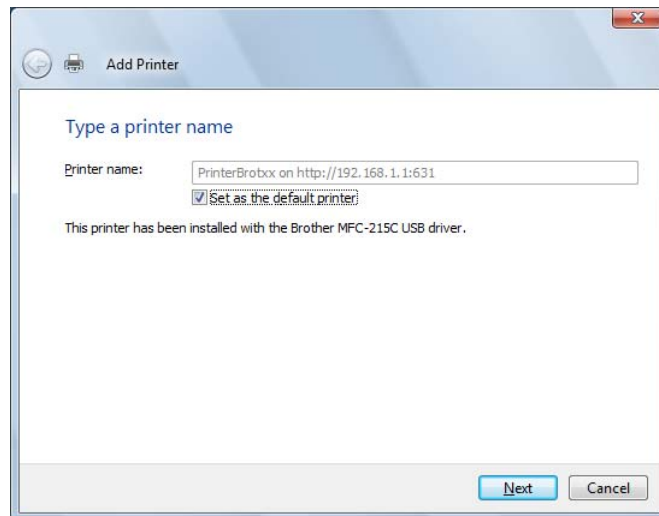
`http : //192.168.1.1 : 631/printers/ PrinterBrotxx`



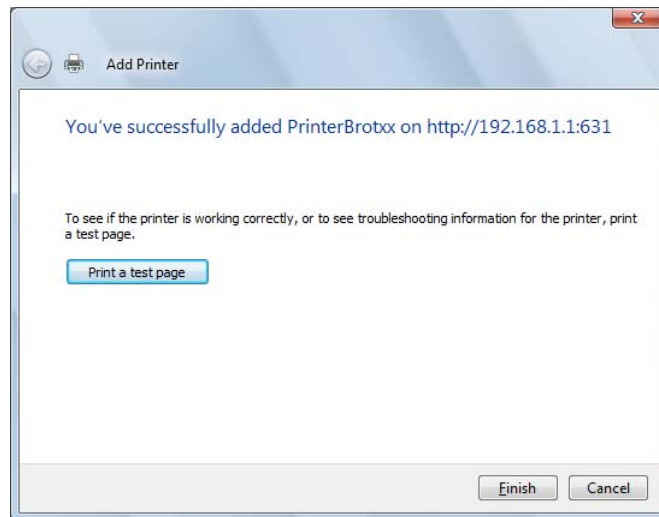
8. Once the computer detects the printer on the Print Server, it will ask for the printer manufacturer and model, a list of printers will be shown, select the your printer from the list and click **OK**.



9. Click **Next** on the **Type a Printer Name** page.



10. To print a test page click on **Print a test page** on the confirmation screen, click **Finish** to complete the installation.



Notes:

1. USB Printers that supports IPP – Internet Printing Protocol are that only printers that will work with the Print Server application on the DSL1015EN. Consult the printer manufacturer for more information on your printer.
2. Scanning, Faxing and Photocopying functions on Multifunction printers are currently not supported on the DSL1015EN, Print function is the only feature that will work on these printers type when connected to the DSL1015EN.
3. Refrain from connecting a USB Hub on the USB port on the DSL1015EN.

Quality of Service

Queue Config

QoS Queue Configuration -- A maximum 16 entries can be configured.

Interfacename	Description	Precedence	Queue Key	Enable	Remove
---------------	-------------	------------	-----------	--------	--------

Click Add to create a QoS Queue Configuration.

QoS Queue Configuration

The screen allows you to configure a QoS queue entry and assign it to a specific network interface. Each interface with QoS enabled will be allocated three queues by default. Each of the queues can be configured for a specific precedence. The queue entry configured here will be used by the classifier to place ingress packets appropriately. **Note: Lower integer values for precedence imply higher priority for this queue relative to others** Click 'Save/Apply' to save and activate the filter.

Queue Configuration Status:

Queue:

Queue Precedence:

QoS Classification

You can add or remove QoS Classification rules.

Quality of Service Setup

Choose Add or Remove to configure network traffic classes.

MARK				TRAFFIC CLASSIFICATION RULES													
Class Name	DSCP Mark	Queue ID	802.1P Mark	Lan Port	Protocol	DSCP	Source Addr./Mask	Source Port	Dest. Addr./Mask	Dest. Port	Source MAC Addr./Mask	Destination MAC Addr./Mask	802.1P	Order	Enable/Disable	Remove	Edit
<input type="button" value="Add"/> <input type="button" value="Save/Apply"/>																	

Click Add to create a Network Traffic Class Rule.

Add Network Traffic Class Rule

The screen creates a traffic class rule to classify the upstream traffic, assign queue which defines the precedence and the interface and optionally overwrite the IP header DSCP byte. A rule consists of a class name and at least one condition below. All of the specified conditions in this classification rule must be satisfied for the rule to take effect. Click 'Save/Apply' to save and activate the rule.

Traffic Class Name:

Rule Order:

Rule Status:

Assign ATM Priority and/or DSCP Mark for the class

If non-blank value is selected for 'Assign Differentiated Services Code Point (DSCP) Mark', the corresponding DSCP byte in the IP header of the upstream packet is overwritten by the selected value.

Assign Classification Queue:

Assign Differentiated Services Code Point (DSCP) Mark:

Mark 802.1p if 802.1q is enabled:

Specify Traffic Classification Rules

Enter the following conditions either for IP level, SET-1, or for IEEE 802.1p, SET-2.

SET-1

Physical LAN Port:

Protocol:

Differentiated Services Code Point (DSCP) Check:

IP Address

Source Subnet Mask:

UDP/TCP Source Port (port or port:port):

Destination IP Address:

Destination Subnet Mask:

UDP/TCP Destination Port (port or port:port):

Source MAC Address:

Source MAC Mask:

Destination MAC Address:

Destination MAC Mask:

SET-2

802.1p Priority:

Routing

Default Gateway

The Enable Automatic Assigned Default Gateway checkbox is ticked by default. The router will accept the first received Default Gateway assignment from one of the PPPoA, PPPoE or MER/DHCP enabled PVC(s).

Routing -- Default Gateway

If Enable Automatic Assigned Default Gateway checkbox is selected, this router will accept the first received default gateway assignment from one of the PPPoA, PPPoE or MER/DHCP enabled PVC(s). If the checkbox is not selected, enter the static default gateway AND/OR a WAN interface. Click 'Save/Apply' button to save it.

NOTE: If changing the Automatic Assigned Default Gateway from unselected to selected, You must reboot the router to get the automatic assigned default gateway.

☒ Enable Automatic Assigned Default Gateway

Save/Apply

Static Route

If your LAN consists of multiple subnets and you want to manually define the data transmitting paths, Static Route is to be used.

Routing -- Static Route (A maximum 32 entries can be configured)

Destination	Subnet Mask	Gateway	Interface	Remove
-------------	-------------	---------	-----------	--------

Add

Remove

To create a new Static Route, click Add. The Routing-Static Route Add page will show up.

The screenshot shows a web form titled "Routing -- Static Route Add". Below the title is a brief instruction: "Enter the destination network address, subnet mask, gateway AND/OR available WAN interface then click 'Save/Apply' to add the entry to the routing table." The form contains several input fields: "Destination Network Address:" with a text box, "Subnet Mask:" with a text box, a checkbox for "Use Gateway IP Address" with an adjacent text box, and a checked checkbox for "Use Interface" with a dropdown menu. At the bottom right of the form is a "Save/Apply" button.

The key settings for adding a new Static Route are explained:

Destination Network Address Enter the network address to which the data packets are to be sent.

Subnet Mask Enter the subnet mask for this destination.

Use Gateway IP Address If you wish to use a specific gateway to reach the destination network, select this checkbox and then enter the IP address of the gateway.

Use Interface If you wish to use a particular WAN interface, select the checkbox and select the interface.

Click Save/Apply to take effect the settings.

To delete the entry from the routing table list, click its corresponding Remove button.

IPSec

Your router supports the authentication and encryption of data packets.

The screenshot shows a web page titled "IPSec Tunnel Mode Connections". Below the title is the instruction: "Add, edit or remove IPSec tunnel mode connections from this page." Below this instruction is a table with five columns: "Enable", "Connection Name", "Remote Gateway", "Local Addresses", and "Remote Addresses". Below the table is a button labeled "Add New Connection".

Click Add New Connection to create an IPSec Setting.

IPSec Settings

IPSec Connection Name

new connection

Remote IPSec Gateway Address

0.0.0.0

Tunnel access from local IP addresses

Subnet

IP Address for VPN

0.0.0.0

IP Subnetmask

255.255.255.0

Tunnel access from remote IP addresses

Subnet

IP Address for VPN

0.0.0.0

IP Subnetmask

255.255.255.0

Key Exchange Method

Auto(IKE)

Authentication Method

Pre-Shared Key

Pre-Shared Key

key

Perfect Forward Secrecy

Disable

Advanced IKE Settings

Show Advanced Settings

Save / Apply

Certificate

Certificates are used to verify the identity of you and your peers. You can either create or import a Certificate Request.

Local

Local Certificates

Add, View or Remove certificates from this page. Local certificates are used by peers to verify your identity. Maximum 4 certificates can be stored.

Name	In Use	Subject	Type	Action
------	--------	---------	------	--------

Create Certificate Request

Import Certificate

Create Certificate Request

Create new certificate request

To generate a certificate signing request you need to include Common Name, Organization Name, State/Province Name, and the 2-letter Country Code for the certificate.

Certificate Name:

Common Name:

Organization Name:

State/Province Name:

Country/Region Name:

Import Certificate

Import certificate

Enter certificate name, paste certificate content and private key.

Certificate Name:

Certificate:

-----BEGIN CERTIFICATE-----
<insert certificate here>
-----END CERTIFICATE-----

Private Key:

-----BEGIN RSA PRIVATE KEY-----
<insert private key here>
-----END RSA PRIVATE KEY-----

Trusted CA

Trusted CA is used to verify the certificate of your peers.

Trusted CA (Certificate Authority) Certificates
Add, View or Remove certificates from this page. CA certificates are used by you to verify peers' certificates.
Maximum 4 certificates can be stored.

Name	Subject	Type	Action
------	---------	------	--------

Import Certificate

Click Import Certificate.

Import CA certificate
Enter certificate name and paste certificate content.

Certificate Name:

Certificate:

-----BEGIN CERTIFICATE-----
<insert certificate here>
-----END CERTIFICATE-----

Apply

Wireless

Setup

The Setup page allows you to enable the wireless network and configure its basic settings.

Advanced>Wireless>Setup

Wireless -- Basic

This page allows you to configure basic features of the wireless LAN interface. Click Apply to commit and save changes.

- ☒ Enable Wireless
- ☐ Hide Access Point
- ☐ Disable WMM Advertise

SSID:

BSSID: 00:C0:02:0F:C2:50

Security

The router supports all the popular wireless security protocols.

Manual Setup AP

You can set the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength. Click "Save/Apply" when done.

Select SSID:

Network Authentication:

WEP Encryption:

Encryption Strength:

Current Network Key:

Network Key 1:

Network Key 2:

Network Key 3:

Network Key 4:

Enter 13 ASCII characters or 26 hexadecimal digits for 128-bit encryption keys
Enter 5 ASCII characters or 10 hexadecimal digits for 64-bit encryption keys

Management

Wireless Management allows you to add or remove the MAC Address of devices which will be allowed or denied access to the wireless network.

Wireless -- MAC Filter

MAC Restrict Mode: ☒ Disabled ☐ Allow ☐ Deny

MAC Address

Remove

Add

Remove

Click Add to add a MAC Address.

Wireless -- MAC Filter

Enter the MAC address and click "Apply" to add the MAC address to the wireless MAC address filters.

MAC Address:

Save/Apply

WDS

WDS allows you to configure the router's access point as a bridge.

Wireless -- Bridge

This page allows you to configure wireless bridge features of the wireless LAN interface. You can select Wireless Bridge (also known as Wireless Distribution System) to disables access point functionality. Selecting Access Point enables access point functionality. Wireless bridge functionality will still be available and wireless stations will be able to associate to the AP. Select Disabled in Bridge Restrict which disables wireless bridge restriction. Any wireless bridge will be granted access. Selecting Enabled or Enabled(Scan) enables wireless bridge restriction. Only those bridges selected in Remote Bridges will be granted access.

Click "Refresh" to update the remote bridges. Wait for few seconds to update.

Click "Save/Apply" to configure the wireless bridge options.

AP Mode:

Access Point

Bridge Restrict:

Disabled

Refresh

Save/Apply

Station Info

Station Info scans wireless stations and displays their status.

Wireless -- Authenticated Stations

This page shows authenticated wireless stations and their status.

MAC	Associated	Authorized	SSID	Interface
00:E0:98:CD:78:DF	Yes		wirelessnetworkname	wl0

Refresh

Diagnostics

The router has a diagnostic feature to test your DSL connection. You can use the diagnostic menu to perform the following test functions from the router.

- Testing the connection to your local network
- Testing the connection to your DSL service provider.
- Testing the connection to your Internet service provider.

quickstart Diagnostics

Your modem is capable of testing your DSL connection. The individual tests are listed below. If a test displays a fail status, click "Rerun Diagnostic Tests" at the bottom of this page to make sure the fail status is consistent. If the test continues to fail, click "Help" and follow the troubleshooting procedures.

Test the connection to your local network

Test your ENET(1-4) Connection:	PASS	Help
Test your Wireless Connection:	PASS	Help

Test the connection to your DSL service provider

Test ADSL Synchronization:	PASS	Help
Test ATM OAM F5 segment ping:	PASS	Help
Test ATM OAM F5 end-to-end ping:	PASS	Help

Test the connection to your Internet service provider

Test PPP server session:	PASS	Help
Test authentication with ISP:	PASS	Help
Test the assigned IP address:	PASS	Help
Ping default gateway:	PASS	Help
Ping primary Domain Name Server:	PASS	Help

Security

Access IP Control

The Access IP Control Mode is disabled by default.

Access Control -- IP Address

The IP Address Access Control mode, if enabled, permits access to local management services from IP addresses contained in the Access Control List. If the Access Control mode is disabled, the system will not validate IP addresses for incoming packets. The services are the system applications listed in the Service Control List

Access Control Mode: ☒ Disable ☐ Enable

IP Address	Remove
------------	--------

To allow remote management based on an authorized IP address, select Enable and click Add.

Key in the IP address of the PC from which a user will be allowed to access the web configuration menu.

Click Save/Apply to take effect the settings. Then the IP Address will be added into the table list.

To delete the existing IP address, tick the Remove checkbox next to the selected IP address in the table list and click then Remove.

Access Control

Enter the IP address of the management station permitted to access the local management services, and click 'Save/Apply.'

IP Address:

Status

Connection Status

Connection status displays a statistical summary of the data transaction for each connection.

Statistics -- WAN

Service	VPI/VCI	Protocol	Interface	Received				Transmitted				
				Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops	

Reset Statistics

Modem Status

Modem Status displays a statistical summary of the ADSL connection.

Statistics -- ADSL

Mode:		
Type:		
Line Coding:		
Status:	Link Down	
Link Power State:	LO	
	Downstream	Upstream
SNR Margin (dB):		
Attenuation (dB):		
Output Power (dBm):		
Attainable Rate (Kbps):		
Rate (Kbps):		
Super Frames:		
Super Frame Errors:		
RS Words:		
RS Correctable Errors:		
RS Uncorrectable Errors:		
HEC Errors:		
OCD Errors:		
LCD Errors:		
Total Cells:		
Data Cells:		
Bit Errors:		
Total ES:		
Total SES:		
Total UAS:		

ADSL BER Test

Reset Statistics

Local Network Statistics

LAN displays a statistical summary of the data transaction for each interface.

Statistics -- LAN

Interface	Received				Transmitted			
	Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
Ethernet	539405	4215	0	0	1473477	3926	0	0
USB	0	0	0	0	0	0	0	0

Reset Statistics

System Log

This feature provides you a comprehensive list of log entries reporting events which you have configured for viewing.

To view the log, click View System Log.

System Log

The System Log dialog allows you to view the System Log and configure the System Log options.

Click "View System Log" to view the System Log.

Click "Configure System Log" to configure the System Log options.

View System Log

Configure System Log

Remote Log

Remote Log page allows you to send the events on the router to a remote syslog system.


DHCP Clients

DHCP clients page displays all the DHCP clients connected to the router.

Device Info -- DHCP Leases			
Hostname	MAC Address	IP Address	Expires In
mycomputer	00:11:43:87:E7:F2	192.168.1.2	23 hours, 56 minutes, 58 seconds

Product Information

Shows information about the product's model number, firmware, firmware build and software version.


Web Manager
ADSL2/2+ Wireless Gateway

Basic
Home
Quickstart

Advanced
WAN
LAN
Application
Quality of Service
Routing
Certificate
Wireless
Diagnostics
Security
Status
Connection Status
Modem Status
Local Network Statistics
System Log
Remote Log
DHCP Clients
Product Information
USB Device
System Password
Firmware Upgrade
Restore to Defaults
Save and Reboot

Advanced>Product Information

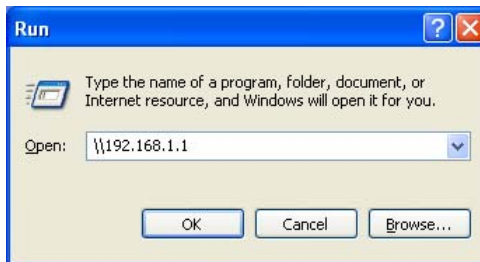
Device Information

Model Number:	DSL1015EN
Firmware Version:	176.106.1
Firmware Build:	003
Base MAC Address:	00:30:0A:8A:4C:00
Board ID:	96358M
Software Version:	3.10L.02.A2p8023n6.d20h
Bootloader (CFE) Version:	1.0.37-10.1
Wireless Driver Version:	RT2880 INIC 1.1.7.3

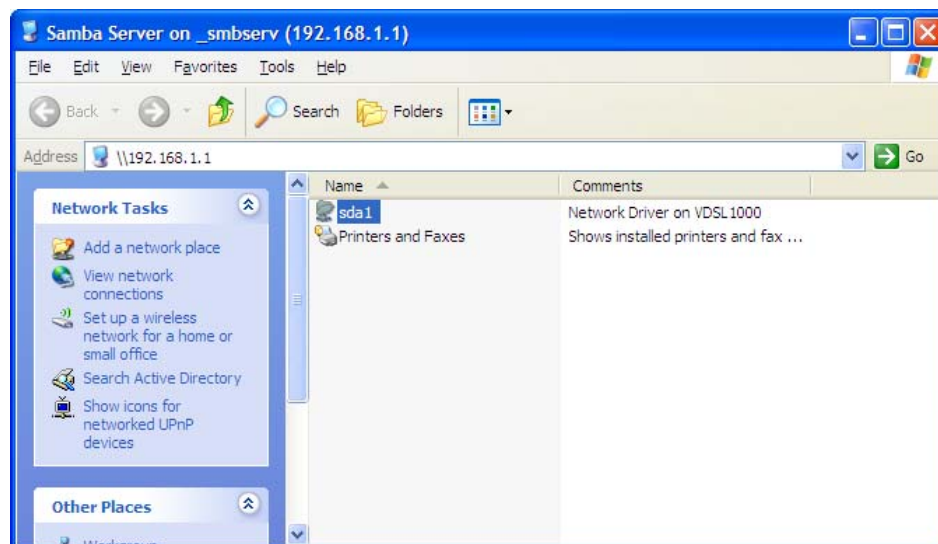
USB Device

The USB port on the DSL1015EN is capable of sharing the contents of your USB storage device to the network. The following steps should be accomplished to share your files on the network.

1. Ensure that the DSL1015EN is OFF, connect the USB storage device and switch it ON.
2. Once the DSL1015EN is ready, you can access the files from your windows explorer, this can be done by clicking on the **Start Button**> **Run**.
3. On the Open box, type: [\\192.168.1.1](http://192.168.1.1) and click on **OK**. If there is a prompt for a username and password, type admin for both the username and password.

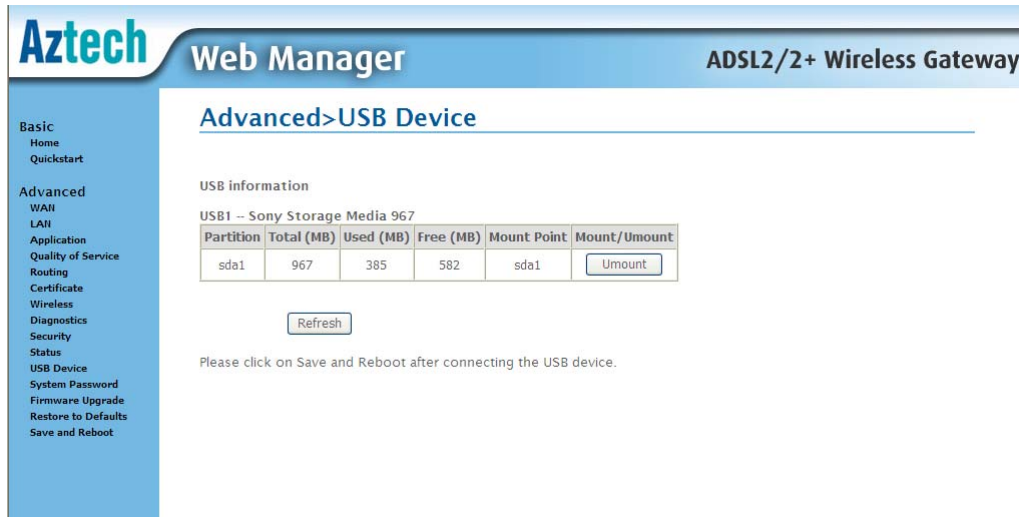


4. From windows explorer, you will see a folder called **sda1**, this is the folder containing the files from your USB storage device.



SAFELY REMOVING THE USB STORAGE DEVICE FROM THE DSL1015EN

1. Open your Internet browser and log on to <http://192.168.1.1>, on the authentication page, type **admin** for both the username and password.
2. Click on **USB Device** under **Advanced** and click on the **Umount** button from the USB Information page.



3. You can safely remove the device once you see the Mount button displayed on the table for USB Information.

Note:

1. The USB Storage feature on the DSL1015EN can only support devices that are formatted with FAT/FAT32 file systems. NTFS and other file systems are currently not supported.

System Password

When you configure the router through an Internet browser, the system requires you to enter your user name and password to validate your access permission. By default, the Username is set to "admin" and the Password to "admin".

Access Control -- Passwords

Access to your DSL router is controlled through three user accounts: admin, support, and user.

The user name "admin" has unrestricted access to change and view configuration of your DSL Router.

The user name "support" is used to allow an ISP technician to access your DSL Router for maintenance and to run diagnostics.

The user name "user" can access the DSL Router, view configuration settings and statistics, as well as, update the router's software.

Use the fields below to enter up to 16 characters and click "Apply" to change or create passwords. Note: Password cannot contain a space.

Username:

Old Password:

New Password:

Confirm Password:

Save/Apply

Firmware Upgrade

The router's software is stored in the FLASH memory and can be upgraded as new software is released. Click Browse to locate the software file and then click Update Software.

Tools -- Update Software
Step 1: Obtain an updated software image file from your ISP.
Step 2: Enter the path to the image file location in the box below or click the "Browse" button to locate the image file.
Step 3: Click the "Update Software" button once to upload the new image file.
NOTE: The update process takes about 2 minutes to complete, and your DSL Router will reboot.
Software File Name:

Restore to Defaults

This page allows you to do the following:

- Backup router Settings
- Restore router Settings
- Restore original router factory settings

Save/Reboot

This feature allows the router to enable new network configuration to take effect or to clear problems with the modem router's network connection.

Click the button below to save and reboot the router.



Safety Precautions

- Do not open, service, or change any component.
- Only qualified technical specialists are allowed to service the equipment.
- Observe safety precautions to avoid electric shock
- Check voltage before connecting to the power supply. Connecting to the wrong voltage will damage the equipment.